

- Here are the youtube links for each video that you need to watch. For each video there are also specific questions.
- You must create a google doc and place the questions and your answers in it and share the doc with me by the end of the class.

Energy 101: (5:18min)

<https://www.youtube.com/watch?v=20Vb6hILQSg>

- 1) What are examples of finite energy sources?
- 2) What are examples of renewable energy sources?
- 3) Where does most of the United State's energy come from according to the video?

Wind Farms: (3:16)

<https://www.youtube.com/watch?v=EYYHfMCw-FI>

- 4) Why does air pressure allow the propellers to spin?
- 5) How many homes can a small wind farm provide power for?

oceanic wind farms: (4:07)

<https://www.youtube.com/watch?v=zUQifpcGTrg>

- 6) How quickly can a turbine be assembled at sea?

Hydroelectricity: (24:35)

largest dam in the world: <https://www.youtube.com/watch?v=b8cCsUBYSkw>

- 7) What country owns the largest dam in the world?
- 8) What is the name of the largest dam in the world?
- 9) How long is the dam and how tall is it?
- 10) What is the main reason that the dam was built?

Oil Drilling: (8:21)

https://www.youtube.com/watch?v=SfazJ6P_g7w

- 11) Which point above the oil layer is it generally best to drill at?
- 12) What is needed to obtain information about the rock being drilled?
- 13) Why are multiple discovery wells necessary?

Hydrothermal Energy: (3:47)

<https://www.youtube.com/watch?v=mCRDf7QxjDk>

- 14) Is geothermal considered renewable or nonrenewable energy?
- 15) How does a flash steam geothermal power plant work?
- 16) What does California recycle that helps to generate more geothermal energy?

Fuel Cell Technology: (4:05)

<https://www.youtube.com/watch?v=QFQGXEi47c0>

- 17) What is a hydrogen fuel cell's exhaust?
- 18) What are two ways that hydrogen is extracted?

Algae-to-Fuels: (2:33)

<https://www.youtube.com/watch?v=lxvVkeW7Nk&index=9&list=PLACD8E92715335CB2>

- 19) What does algae produce that can become biofuels?
- 20) What two methods break down the algae to allow extraction?
- 21) What are two types of water that algae is good at growing in?

Solar PV: (2:00)

<https://www.youtube.com/watch?v=0elhlcPVtKE&index=15&list=PLACD8E92715335CB2>

- 22) The amount of energy we receive from the Sun in one hour can power the entire Earth for how long?
- 23) What are the tiny packets of energy called that sunlight is made up of?

Active vs Passive Solar Heating: (7:22)

<https://www.youtube.com/watch?v=5d1LXp38-c>

- 21) What is passive solar heating?
- 22) Why is a south facing window important for a home in the northern hemisphere?
- 23) Why is it more common for snow to stick to grass but melt on road and sidewalks?
- 24) What is active solar heating?
- 25) What is an example of active solar heating?
- 26) What substance do hydronic collectors use to collect and transfer heat?

How the Sun works: (6:13)

<https://www.youtube.com/watch?v=VEAeyg3Od9c>

- 27) What type of star is our Sun?
- 28) What did early scientists think our Sun was powered by?
- 29) How long would the Sun have lasted if it was powered by a burning fuel source?
- 30) What is the name of the process that actually powers the Sun?
- 31) When hydrogen atoms are fused what new kind of atom is produced?